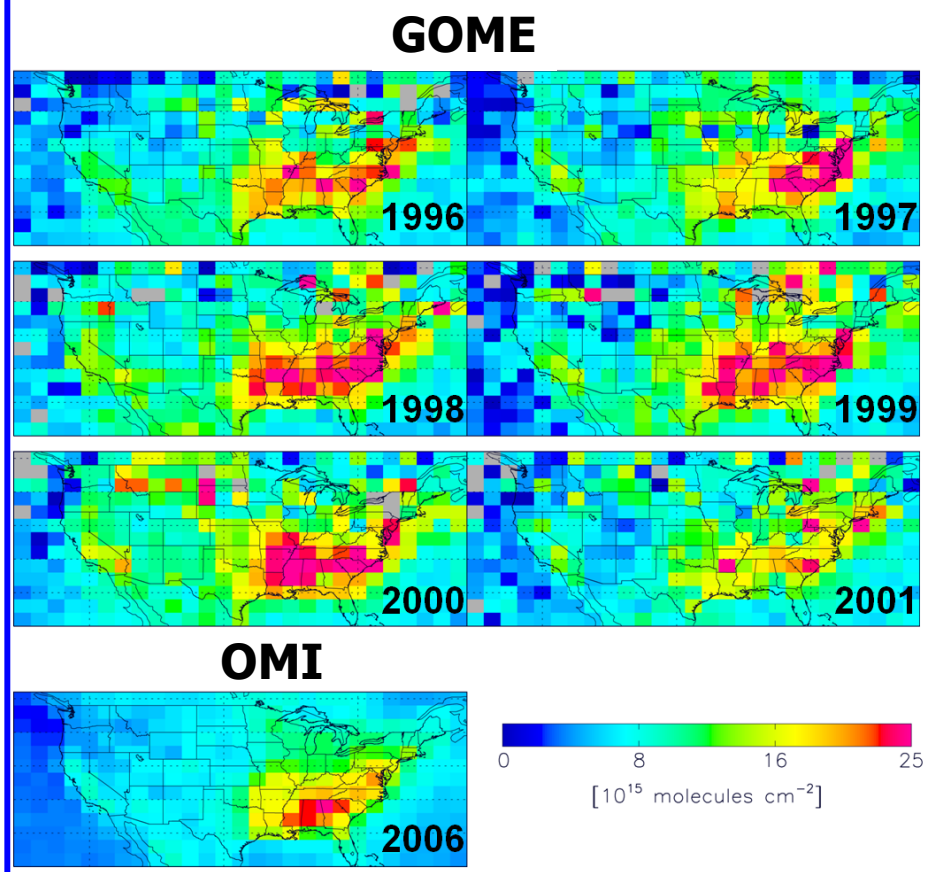
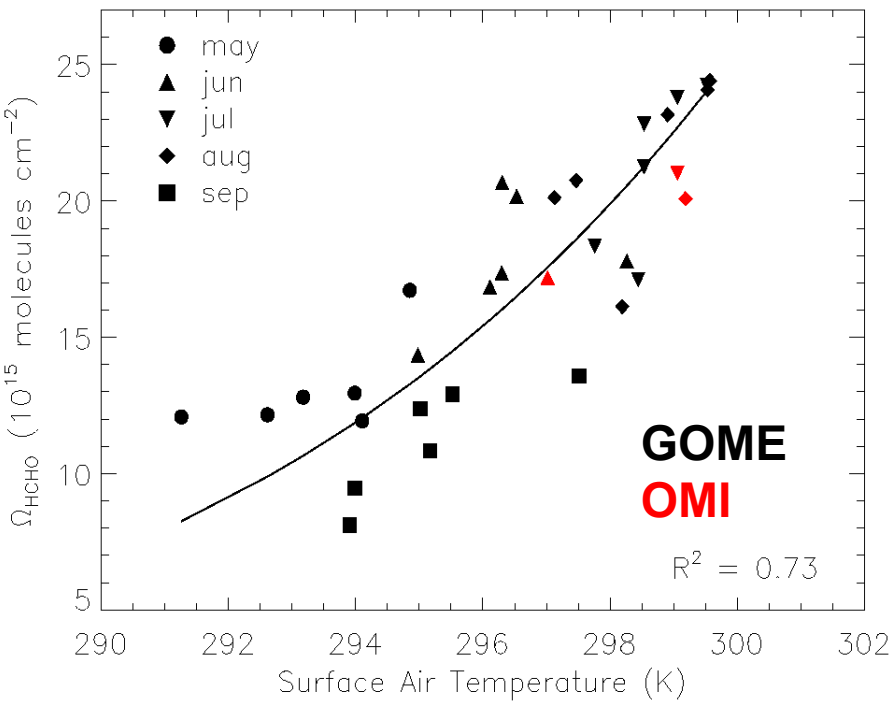
OMI HCHO & AQ:

Latest OMI HCHO product consistent with GOME over the US Southeast (to 2-14%) after correcting for year-to-year temperature differences



June-August HCHO columns @ 2° × 2.5°.

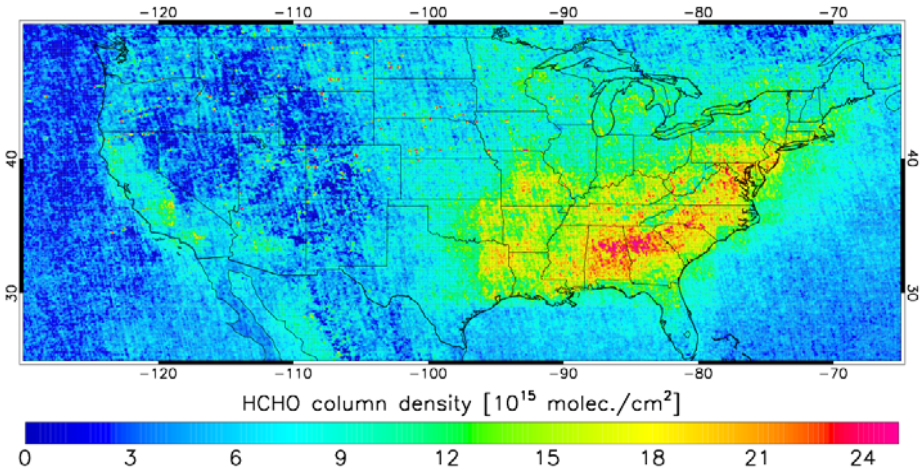


HCHO columns over the U.S. Southeast as a function of the surface air temperature.

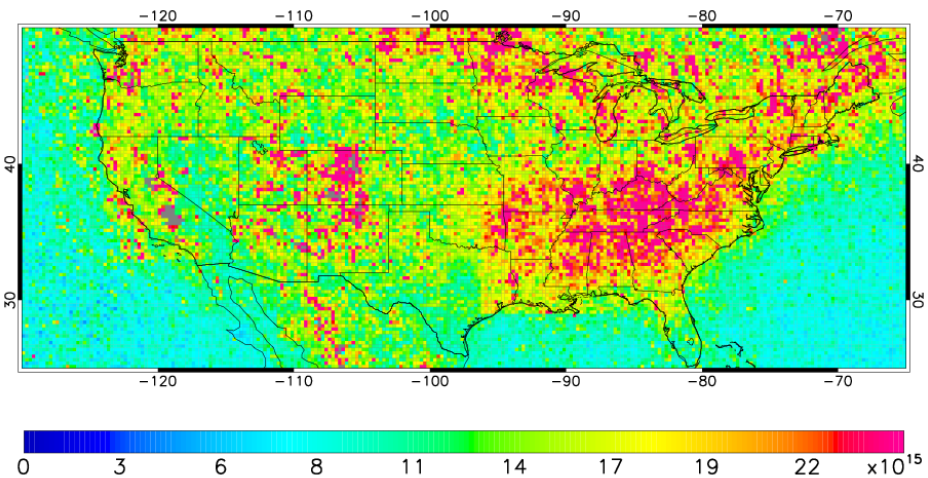
OMI HCHO & AQ:

But noise limits the usable spatial/temporal resolution

OMI HCHO: June-August 2006



OMI HCHO Standard Deviation

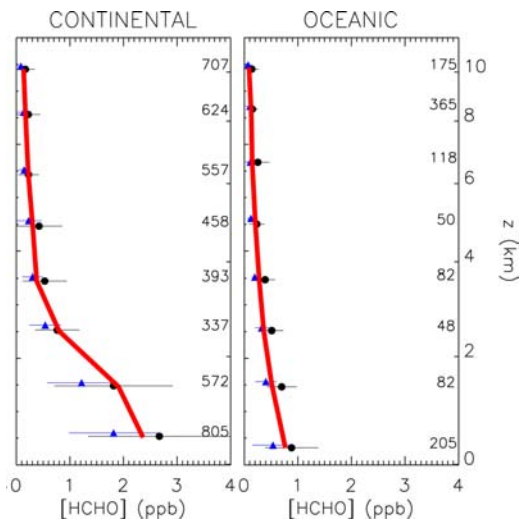


Noise in OMI HCHO is ~ order highest observed columns.

1SD ~ 1-3 x 10^{16} molec/cm^2

→ 11-25 measurements to reduce std. error to ~0.6 x 10^{16} molec/cm^2 (i.e. ~ 2ppb in BL)

→ 2 weeks or 1.5°-2° resolution



Aircraft measurements/GEOS-Chem model results over N. America